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ABSTRACT

This study evaluated and compared two models of teacher education, a traditional certificate-only and a fifth-year Master of Arts in Teaching program, to determine their effectiveness in producing desirable outcomes in preservice teacher candidates. The salient characteristics of each of the programs are described. Most of the subjects of the study were involved in coursework and practica during the year prior to the collection of data, although a few of the certificate-only students extended their teacher preparation over a slightly longer period. Data was collected when most of the subjects had completed their student teaching and were evaluated by their public school supervising teachers on their attainment of a specific list of 15 competencies. All the students and their supervising teachers were asked to evaluate the teacher education program on the extent to which it successfully accomplished the goal of providing the knowledge and skills required to be a competent beginning teacher. The data is discussed in detail accompanied by tables. The results of the data analysis indicated that in general both programs provided the majority of the preservice teaching candidates with satisfactory knowledge of effective teaching practices and ability to implement those practices in the classroom. A comparison between the two programs indicated some differences in their impact. These differences are discussed and analyzed. (JD)

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COMPARISON OF STUDENT ATTAINMENT OF TEACHING COMPETENCIES IN TRADITIONAL PRESERVICE AND FIFTH-YEAR MASTER OF ARTS IN TEACHING PROGRAMS

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COMPARISON OF STUDENT ATTAINMENT OF TEACHING COMPETENCIES IN TRADITIONAL PRESERVICE AND FIFTH-YEAR MASTER OF ARTS IN TEACHING PROGRAMS

Teacher education is currently receiving wide-spread attention in this country. A series of national reports have addressed the sad state of the teaching profession and proposed a variety of solutions to this critical problem (Carnegie Task Force, 1986; Holmes Group, 1986). However, the recommendations for the improvement of teacher education which have appeared in those reports and in the various professional responses to them are sufficiently diverse, and each supported by sufficiently valid arguments, to indicate that before any major changes in the preparation of teachers is instituted, extensive research is needed to determine whether any one recommended solution is superior to the rest in preparing effective beginning teachers.

In particular, the Holmes report urged that, to be truly professional, all teacher preparation should occur at the graduate level in conjunction with a master's degree program (Holmes, 1986). While it seems plausible that such a change will improve teacher education, there is little actual evidence to support that claim. Some critics have proposed instead that it is the quality of a program which is critical and that improving traditional preparation programs may be more defensible and economical (Tom, 1986). Others have questioned the value of a master's degree for beginning teachers and suggest that basic preparation can precede experience in the schools with opportunities provided after 2 or 3 years to return for greater depth within a master's degree program. Given that the reforms recommended by the Holmes group will be costly, it seems desirable to determine whether a preservice master's degree program does in fact make a difference to beginning teacher effectiveness (Hawley, 1986). The purpose of the study presented here is to evaluate two models of teacher education, a traditional certification-only and a fifth-year Master of Arts in Teaching program, to determine their effectiveness in producing desirable outcomes in preservice teaching candidates.

The Programs

Originally, the teacher preparation program at a small liberal-arts institution in the Pacific Northwest consisted of a single rather traditional preservice certification sequence available to undergraduates and a few post-baccalaureate students. Upon receipt of a three-year grant from the U.S. Government Office of Educational Research and

Improvement, the program faculty began an extensive process of evaluation and modification of the preservice offerings. The first step was a review of the current research on effective teaching and the training of effective practitioners. This was done in collaboration with representatives from the public schools who were also interested in identifying the important issues in teacher education and the most effective means of preparing beginning teachers. The resulting focus, expressed in a new philosophy statement for the program, was to make teacher education increasingly scholarly, rigorous, research-based, democratic, participatory, student-centered, humane and effective. The general recommendations out of the research which guided the subsequent program changes are given in Figure 1. The specific competencies which were identified as encapsulating the characteristics of effective teachers and thus desired outcomes of a teacher preparation program have formed the basis of the evaluation process which provided the data for this study.

As a result of the review of the research literature, a fifth-year preservice Master of Arts in Teaching program was developed in secondary Language Arts and Social Studies which incorporated the recommendations for effective teacher preparation and for improving the quality of teaching in public high schools. The program is a 15-month sequence which combines professional education courses with liberal-arts study for 60 hours of graduate work. Collaboration between college and public school personnel supports an intensive nine-month internship in the schools which accompanies the coursework. Like previous MAT programs, this one is designed to attract older students with solid grounding in an academic discipline. However it differs from those programs by emphasizing collaboration between college and secondary school, and the critical analysis and development of curriculum. In addition, the program emphasizes the possibility for change within public schools and the commitment to working with at-risk students. Program participants, as part of their internship, receive a stipends from the school districts in which they are placed. The public school mentors also received a stipend, this from the college, which is more substantial that the honoraria usually offered to those who supervise student teachers. In addition they receive continuing education credit for participation in the mentor sèminars which are an integral part of the program, tuition for one course, and adjunct faculty status.

After two years of practice and extensive evaluation by all participants, the program now consists of a summer term which includes Adolescent Development and Learning, Social/Historical/Ethical Perspectives on Education, a subject area elective, and a course on Individual and Societal Perspectives on Adulthood, the last taken with degree candidates from other professional graduate programs. During the fall term, students again take an

Figure 1: General Recommendations for Improving Teacher Education

The program should be designed and organized to:

1. emphasizes more extensive subject and professional education such as is possible in a fifth-year program in order to reduce narrow specialization;
2. have a community-based collaborative model of teacher education where the separate institutions interested in teacher preparation organize in new arrangements to be most effective in the preparation process;
3. view the teacher not as a technician who simply needs skills in transmitting knowledge but as a professional decision-maker, a reflective practitioner, who is prepared for the broad educational, social and political responsibilities of the profession as well as the selection and implementation of effective methods in the classroom;
4. attract students of diverse backgrounds who are life-long learners desiring expertise and the development of the whole person at whatever stage in their career they happen to be, and who are committed to having an impact on the direction of education in this state and elsewhere;
5. use expert teacher models, and encourage students to possess a repertoire of skills and abilities;
6. have a meaning-making focus where the learner is actively engaged and cognizant of their own knowledge and strategies (metacognition). The student-centered approach has the teacher as an enabler, a facilitiator, who can encourage learning in his or her students. This includes a whole language approach to reading and writing--a model of literacy which is meaning-centered, emphasizing purposeful communication and the integration of speaking, listening, reading, and writing;
7. emphasize the effective integration of management and instructional strategies within a specific context as a means of enhancing the achievement, motivation, responsibility and creativity of various students. This includes a broad set of skills which incorporate factors related to personal relationships, classroom climate, organization, instruction and discipline;
8. address the concerns of professional in many areas who must understand and accommodate personal and organizational elements which affect their professional activities.

elective in their subject area, Literacy and Ethnography, and Classroom Instruction and Learning which is split into two parts, one interdisciplinary across the MAT certification areas, the other by subject matter discipline. The internship and accompanying seminar involve eight hours per week. In winter, another elective in the subject area is taken, with a course on The Structure of Knowledge and the Curriculum, and the internship and seminar for approximately ten hours per week. Spring term consists exclusively of the teaching practicum where interns assume full responsibility for the classes at their school site. The final term in the summer includes a course on Researching Teaching Goals and Strategies, a seminar to integrate Experience and Meaning, another subject area elective, and the second course with students from other programs which considers issues of concern to professionals in general, this time on Organizational Cultures (see Appendix). Some students must take additional credit hours for their subject area endorsement.

The original certification-only preservice sequence was also modified to reflect the clearer focus provided by the research review and application. It was carefully restructured to achieve the same specific set of competencies: the required sequence was changed to tighten the coordination of the course work and practica around the competencies; the student teaching experience was structured explicitly around the specific knowledge and skill outcomes which are desired with both the college faculty and the public school cooperating teachers encouraged to focus their supervision on those specific aspects of effective teaching; the accompanying student teaching seminar was similarly focused; and the assessment process tightly tied to evaluating the attainment of the competencies.

Currently the secondary certification-only sequence consists of 38 quarter hours. This includes an introductory course with extensive field experience, adolescent psychology, educational psychology, social foundations of education, verbal and visual literacy, an instructional strategies course which includes five weeks of structured and unstructured experiences in the school in which the student will student teach the subsequent term, and the student teaching term. Practica are included in almost all of the foundation courses. Students have an opportunity to take most of the courses at different times and in somewhat different order with only the final strategies class and student teaching taken as a sequence under the same professor by each cohort. The elementary certification-only sequence is more extensive because of the state mandated requirements in various subject area methodologies, equaling 45 quarter hours of foundation and method classes and 15 of student teaching. The majority of the students take the methods courses in the fall and winter terms prior to spring term student teaching. Thus they are members of a tight cohort group which share the same experiences under the guidance of the same few professors.

Methodology

Subjects

The Teacher Education Program is open to all students who desire teacher certification in the state. Applicants must have at least a 2.5 GPA for the certification-only sequence, or 3.0 for the MAT program, and an extensive grounding in the academic subject area in which they wish to teach at the secondary level, or an academic major plus breadth of subject area coverage for elementary teaching. For the newly developed preservice MAT program, emphasis was placed on attracting older students, well grounded in their academic disciplines who shared the programs committment to change in public education. Many had worked at a variety of jobs and had been actively involved with working for social change prior to entry. 15 finished their student teaching for the preservice MAT program in secondary social studies and language arts. 16 students complete the secondary certification-only program at the end of the same term--7 social studies, 5 language arts, 2 math, 2 foreign language, and 1 art. 13 additional students completed the certification-only preservice elementary education sequence in the spring, with one other student extending his student teaching into the fall for a total of 14. Thus most of the subjects of this study were involved in coursework and practica during the year prior to the collection of data, although a few of the certification-only students extended their teacher preparation over a slightly longer period.

Procedure

The major data to be discussed here was collected at the end of spring term, 1988, as most of the certification-only and MAT students completed their student teaching and were evaluated by their public school supervising teachers on their attainment of a specific list of 15 competencies characteristic of effective teachers. The final student teacher evaluation forms are routinely sent out to the supervising teachers toward the end of the term, and when returned are placed in the students' permanent placement files that are used for job application. The rating scale on the forms range from 1 (Low Competence) to 5 (Exceptional Competence) for each competency, with an opportunity to indicate if the competency was not observed or was judged as not applicable to the teaching role being evaluated (NA). A scale to indicate a final summary rating of the student's overall performance in comparison to "other student teachers," or to "others who are completing their initial teaching experience" for the MAT students, is also included along with a space for comments.

All the students and their supervising teachers were also asked to evaluated the teacher education program on the extent to which it successfully accomplished the goal of

providing the knowledge and skills required to be a competent beginning teacher. These program evaluation forms used a three point scale of Very Successful(VS), Successful(S), and Not Successful(NS) with NA available to indicate that the respondent feels the particular competency is something that cannot be taught in a teacher education program. For the students, the form elicits two responses for each competency, one for whether the program "provided an understanding of what that competency means and why it is important (the **Theory**)", and another for whether the program "provided the knowledge and skills to be effective in the classroom in that area (the **Practice**)". The form for the public school supervisors does not distinquish between theory and practice. All forms include a summary rating to indicate the overall assessment of the program's performance in preparing the student. The scale here is 1 (Poor) through 3 (Satisfactory) to 5 (Very Good). Space for written comments is included with each competency, and with the summary rating. The program evaluation instruments were administer to the secondary student teacher and interns during regularly scheduled meeting times. The forms for the supervisors and the elementary student teachers were sent through the regular mail with return envelopes enclosed to encourage completion. While the return rate was quite good for the supervisors, there was no way to distinguish between the elementary and secondary certification-only teachers, making it necessary to combine the evaluation results for these two groups. The elementary student teachers were not very responsive and the few forms that were returned have not been used in this analysis.

Results and Discussion

It is possible that these different programs attract very different types of candidates. Given that not all individuals are equally suited to teaching, or to a specific approach to this complex profession, it is necessary first to examine basic demographic information about the students in the different programs to determine as best as possible whether there are differences which may confound the interpretation of the results. Information about age, sex, and academic ability and experience was obtained from the files for all candidates and is summarized in Table 1.

These data indicate some interesting differences and similarities between the students enrolled in the programs. There are more young undergraduate women in the elementary program, which is not surprising. However for the secondary, many of the students in the certification-only program are college graduates and older, as are the MAT students, although more of them are women (55%). The MAT program with its internship requires graduate students to have the resources and time to be more than just full-time students for a fifteen-month period. The certification-only program, being a less intensive, more

Table 1. Demographic information on students in programs for Certification-Only Elementary and Secondary and Master of Arts in Teaching Secondary

	Elementary CO (N=14)	Secondary CO (N=16)	MAT (N=15)
Sex - % female	79 (11)	63 (10)	27 (4)
Level - % graduate	36 (5)	69 (11)	100 (15)
Age			
Mean	26.6	29.6	32.0
Mean for graduates only	32.0	32.8	32.0
Median	26	25	33
Range	22-40	21-46	25-41
Undergraduate GPA - Mean	3.26	3.3	3.3
Graduate GPA - Mean	3.72(5)	3.52 (11)	3.60 (15)
# Graduate credits - Mean	48.4(5)	40 (10)	55.3 (12)
CBEST	(N=14)	(N=15)	(N=12)
Reading			
Mean	54.3	60.2	62
Median	49	60	64
Range	39-80	45-76	53-70
Math			
Mean	59.4	60.1	57.2
Median	58	64	56
Range	42-79	20-79	39-75
Writing			
Mean	42.6	47.9	51.5
Median	47	47	50
Range	39-75	29-63	41-63
Total			
Mean	161.7	168.5	170.4
Median	157	171	166
Range	136-205	97-203	155-189

Undergraduate colleges for graduate students:

Elementary: Cal. St, Bethal, Lewis & Clark, WSU, Univ.Portland

CO Secondary: Univ. Kansas, WSU, Lewis & Clark(2), Evergreen, OSU, Portland St.(2), Univ. Nevada, Middlebury, Queens

MAT Secondary: Western Wash, Oregon St, Lewis & Clark(3), Central Wash, Portland St.(3), Wilmington, Wash.St., Univ. Oregon, Mt.Holyoke, Gonzaga, Vanderbilt.

flexible program is attractive to post-baccalaureate students who cannot or do not want to make that kind of time commitment, who already have their masters, or who have completed some education coursework or experience and therefore do not need all the components included in the MAT program.

Summary information about the academic achievement of the students indicates little differences between the groups: the means for both undergraduate and graduate GPAs are similar, as are the undergraduate institutions of the post-baccalaureate students. All these students appear to be academically able. One difference is that the certification-only students had to completed their subject area studies according to state-prescribed requirements for breadth of coverage. Most of the post-baccalaureate students had accomplished the majority of this work prior to entering the program and therefore only enrolled in professional courses. MAT students were admitted under new state guidelines that simply specify an undergraduate degree in an appropriate area. The program itself includes subject area courses which then serve to round out their knowledge in various areas of the curriculum they might be teaching. Thus their graduate GPA includes subject area courses as well as professional preparation.

The CBEST scores for the elementary group are somewhat lower on the reading and writing sections while the mean scores for the MAT group are higher in those areas. The certificate-only group has a wider range of scores than the MAT students with both more low and more high scores. There was one very weak art post-baccalaureate student in the secondary certification-only program who did not pass the CBEST, and was only barely credited for student teaching. Without her scores, the mean CBEST scores for the graduate certification-only students are almost identical to those of the MAT students (Reading: 62, Math: 59.7, Writing: 48.6, Total: 170.2). The data on GPA and CBEST suggest that, on average, the post-baccalaureate students seeking initial certification for teaching at the secondary level had similar levels of basic academic abilities and achievements. The mean scores for the 5 graduate students in the elementary program remain lower than those of the other groups (Reading: 56.6, Math: 53.6, Writing: 44.6, Total: 154.8). However, for that group as well as the other two, for those who scored above the minimum passing level, there is no consistent relationship between CBEST scores and how effective they were as student teachers as indicated by their final student teaching evaluation.

Table 2 summarizes the data from the final student teacher evaluation forms completed by the supervisors in the public schools. Most of the ratings in the elementary certification-only and the MAT secondary programs are 4s and 5s, indicating a high level of competency as a whole for those two groups of students. The certification-only secondary has more lower ratings than the other two. Examination of

Table 2: Number of preservice MAT and certification-only secondary and elementary teaching candidates receiving from their cooperating teacher or mentor ratings of 1, 2, 3, 4, or 5 (5 high) in each competency area on the Final Student Teacher Evaluation Forms. (Some supervisors left one or more scales unmarked, or indicated NA.)

Competency Area	Cert.-only Elementary (N=14)				Cert.-only Secondary (N=15)				MAT Intern Secondary (N=14)			
	1-2	3	4	5	2	3	4	5	2	3	4	5
Knowledge												
1. Subj. Area K.	1	1	2	10	1	4	6	4	0	0	4	10*
2. Translate K	1	1	2	10	1	2	4	7	0	2	8	4
Instruction												
3. Plan Curriculum	1	1	4	8	0	4	5	6	1	1	5	7
4. Engend.Stud.Interest	1	1	1	11	1	4	1	8	0	1	6	7
5. Variety of Techniques	1	1	4	8	0	3	4	8	1	2	2*	9
6. Connect to Prior K.	1	1	3	9	0	3	5	7	0	1	9	4
7. Enhance Cog. Abil.	1	2	3	8	1	3	2	8	0	2	6*	6
8. Foster Indep. Learn.	1	2	1	10	2	2	4	7	0	3*	3	8
Evaluation												
9. Assess and Feedback	1	1	5	7	0	4	2	9	0	0	7	7*
Individual Differences												
10.Attend to Indiv.Diff.	0	2	4	8	0	4	1	9	0	1	4	9
Management												
11.Manage class	2	1	3	8	1	4	5	5	0	3	8*	3
Interpersonal Relations												
12.Relate to all	2	0	1	11	0	2	3	10	1	0	3	10
13.Encourage Pos.Inter.	1	2	0	11	0	4	4	7	0	1	3	10*
Professionalism												
14.Dev. Ed. Phil.	1	1	2	10	0	4	3	7	1	0	6*	6
15.Reflective	1	1	2	10	0	2	4	9	1	0	3	10
Summary Rating	1	2	1	10	0	3	2	8	0	1	4	9

* One intern had two mentors. The data reflect the ratings of the mentor in the student's primary subject matter emphasis. The * indicate that the other mentor rated the student one number higher, or in the case of a 5, one lower.

the individual forms for the students reveals that, while there may be an occasional lower rating (3 or less) for those who are otherwise consistently high, most of the 1-3 ratings on the different competencies are for a few individuals who tended to be weaker overall. In the elementary program there was one student who was very weak, two others who were not strong, and one who extended the student teaching experience into the subsequent term and exhibited such growth during that time as to receive a very strong evaluation. For the latter student, the high final evaluations mask the additional effort which was required but do indicate the attainment of the competencies at a high level. For the secondary certification-only program there were two candidates who were notably weaker that the others, including the one art student mentioned above, and two who received mixed ratings. For the MAT group, only one was notably weak, with one other receiving more mixed ratings.

Thus, most of the lower ratings are the result of these few particular individuals and do not provide much information about the effectiveness of the programs except that no program can make all students into effective beginning teachers, and, while more care in admissions leads to fewer weak candidates, even that is no guarantee of 100% success. It is also the case that these evaluation forms are to be placed in students' placement files. Supervising teachers are reluctant to jeopardize the careers of those students with whom they have been involved. Given the tendency to rate students highly for public purposes, it is worth examining the 4 and 5 ratings closely here to determine whether there are any difference which are indicative of the supervisors distinguishing very satisfactory and satisfactory preparation of the majority of the students from a program. It is then possible to compare these evaluations to the anonymous, non-public program evaluations by the same public school teachers, based on the performance of the same students, to draw some general conclusions about program effectiveness.

In examining primarily the 4 and 5 ratings, it is evident that the elementary students were more likely to be highly rated on the competencies than either of the secondary programs. Only one competency, Assessment (9), has as little as 50% of the students in that program receiving the highest rating. The certification-only secondary program not only had a larger number of weaker students, but also had fewer being rated by their public school supervisor as exceptional (5) in their attainment of the competencies. The competencies where these students were least likely to be rated highly are Subject Area Knowledge (1), Curriculum Planning (3) and Management (11). The first is not surprising since the post-baccalaureate students in this program may not have had subject area courses for many years, yet did not need to

take current classes unless their previous transcripts indicated significant gaps in breadth of coverage. Curriculum planning is also difficult when you do not have a grasp of the conceptual framework of the discipline in which you are teaching. This grasp comes with considerable time and experience. Even the majority of the MAT students in the program which emphasized curriculum planning was not exceptionally successful in the eyes of the supervising teachers, although the interns expressed satisfaction with their theoretical preparation to do so. (See below) Greater differences in ability to plan between the two secondary groups may be more apparent after a year or more of actual teaching. The third area, Classroom Management, is also difficult without extensive experience. This has traditionally been a problem for beginning teachers, as well as a source of considerable anxiety. A separate class on management is being added to the secondary certification-only and elementary sequence to develop more skill and encourage confidence. However, this may not be a competency that is amenable to satisfactory preparation prior to actual full-time teaching--interns with more extensive experience in the classroom were also not as likely to be as highly rated in this area. The majority of the secondary certification-only students were highly rated in three of the instructional competencies (4,5,7), Assessment (9), Attending to Individual Differences (10), Relating to all (12), and Reflection (15).

The MAT program produced students who were particularly likely to be rated highly in Subject Area Knowledge (1), Interpersonal Relations (12,13) and Reflection (15). It is interesting that while being knowledgable in their subject areas, they did not tend to excel in Translating Knowledge (2) for their students, or in making Connection to Prior Knowledge (6). As one mentor noted "Most college students start out at the college level and must realize that they must come down to the high school level." This too may be an area for secondary teaching which simply requires more actual teaching experience. What would need to be examined is whether those who have greater knowledge in their beginning teacher preparation, more rapidly and/or to a greater extent are able to develop the ability to perform this competency expertly. The majority of the MAT students also were rated highly for presenting a Variety of Techniques (5), Fostering Independent Learning (8) and Attending to Individual Differences (10), all particular emphases of that program.

It is instructive to compare the results above to the program evaluations from the public school supervisors and the students. Table 3 presents the data for the supervisors. While these data are not as useful as they would be if it were possible to separate the responses by elementary and secondary level, or to correlate the ratings of the program with the ratings of the specific students the supervisors used to judge the programs, there

Table 3: Number and percentages of cooperating teachers and mentors rating the program Not Satisfactory (NS), Satisfactory (S) or Very Satisfactory (VS). (Percentages in parentheses may not add to 100 if respondents indicated the competency area was not applicable, or left the rating blank)

Competency Area	Cooperating Teachers Elementary and Secondary (N=25)			Mentors (N=11)		
	NS	S	VS	NS	S	VS
Knowledge						
1. Knowledge of subject area	6(24)	7(28)	11(44)	0	5(42)	6(55)
2. Appropriate translation of knowledge	4(16)	8(32)	12(48)	1(9)	7(64)	3(27)
Instruction						
3. Plan and present curriculum	4(16)	10(40)	10(40)	1(9)	5(45)	4(36)
4. Engender student interest	3(12)	8(32)	13(52)	1(9)	6(55)	4(36)
5. Variety of instructional techniques	5(20)	6(24)	14(56)	0(0)	4(36)	7(64)
6. Connect material to prior learning	6(24)	10(40)	9(36)	1(9)	4(36)	5(45)
7. Enhance cognitive abilities	4(16)	11(44)	8(32)	2(18)	4(36)	5(45)
8. Foster independent learning	3(12)	11(44)	10(40)	1(9)	8(73)	2(18)
Evaluation						
9. Assess achievement	3(12)	11(44)	10(40)	0(0)	5(45)	5(45)
Individual Differences						
10.Attend to individual differences	1(04)	9(36)	15(60)	1(9)	6(55)	4(36)
Management						
11.Manage class effectively	6(24)	10(40)	9(36)	0(0)	9(82)	2(18)
Interpersonal Relations						
12.Relate positively to all	1(04)	6(24)	15(60)	0(0)	4(36)	7(64)
13.Encourages positive interactions	2(08)	10(40)	13(52)	0(0)	6(55)	5(45)
Professional						
14.Develop an Ed. Phil.	5(20)	6(24)	10(40)	1(9)	6(55)	4(36)
15.Reflective	2(08)	5(20)	17(68)	1(9)	4(36)	6(55)
Summary rating	2 3 4 5			2 3 4 5		
	3(12) 5(20) 1(4) 15(60)			1(9) 0 5(45) 4(36)		

are still some interesting results. Looking first at the certification-only programs, it is clear that the supervisors made a more critical assessment on these forms than on the evaluation of the student teacher: there are fewer of the highest ratings of Very Satisfactory than the exceptional ratings (5) for the students, and more Not Satisfactory ratings than might be predicted from the lowest ratings of 1 and 2 for the students. However, most of the same competencies where students from both the elementary and secondary programs were more likely to be highly rated on the student teacher evaluation form (Table 2), have the majority of supervisors rating the programs Very Satisfactory (4,5,10,12,15), indicating general program strength in these areas. Only Competency 7, Enhancing Cognitive Abilities, was rated lower by more of the supervisors that would be expected from the other form. Most significantly, on the summary rating, 60% of the supervisors indicated that they considered the program to be "very good." Given the instructions on that scale, to give an "overall assessment of the program's performance in preparing your student teacher," it appears that, even though some areas were seen as needing improvement for a particular individual, the supervisors were well satisfied with the program.

For the MAT program, the majority of supervisors rated the program as they had the students, as Very Satisfactory in the competency areas Knowledge of Subject Area (1), Using a Variety of Techniques(5), Relating Positively to All (12), and Reflection (15). Fostering Independent Learning (8), Attending to Individual Differences (10) and Encouraging Positive Interactions (13) are not as positively rated here as on the student forms--there are more Not Satisfactory ratings than might be predicted from the number of the ratings of 1 and 2 on the student forms--and the mentors tend to be more critical in their summary evaluation of the program. Comparison across the programs is difficult, of course. But while it is apparent that the certification-only programs have more Not Satisfactory ratings, they do not overall have a lower percentage of Very Satisfactory rating either. While it might be expected from the ratings on the student evaluation forms that the lower ratings are from the secondary program and the higher from the elementary, examination of the individual program evaluation forms that could be identified as specific to one program or the other do not indicate that pattern. Obviously more data is required before any very specific conclusions can be drawn.

Turning finally to the student evaluations of the programs summarized in Table 4, only the ratings for the two secondary groups are available. In general, for both programs, the students rated their program higher in providing them with an understanding of the theory than of how to implement the practice. Both programs were almost universally perceived by the students as at least satisfactorily covering the theory aspect, with only Translating Knowledge (2), Curriculum Planning (3) and Relating to All (12) for the

Table 4: Number of secondary Student Teachers and Interns who rated the program Not Satisfactory (NS), Satisfactory (S), or Very Satisfactory (VS) on each of the competency area. For Competencies 2-13, students were asked to rate the program in terms of how well it helped them feel competent in both the **theory** and the **practice**. (In a few cases a student indicated the competency area was not applicable to their preparation, or left the rating blank)

Competency Area		Student Teachers (N=15)			MAT Interns(N=15)		
		NS	S	VS	NS	S	VS
Knowledge							
1. Subject Area Knowledge		5	8	2	2	5	8
2. Translate Knowledge	Theory	2	5	8	1	4	9
	Practice	2	9	3	3	11	1
Instruction							
3. Plan Curriculum	Theory	3	7	5	0	5	10
	Practice	4	7	2	1	9	5
4. Engender Student Interest	Theory	0	6	9	0	5	10
	Practice	2	8	5	3	6	6
5. Provide Variety	Theory	1	6	8	0	4	11
	Practice	1	7	7	0	8	7
6. Connect to Prior Learning	Theory	0	10	5	2	3	10
	Practice	1	9	5	3	6	6
7. Enhance Cog. Abilities	Theory	0	6	9	0	6	9
	Practice	0	9	6	2	8	5
8. Foster Independent Learn.	Theory	1	6	7	1	5	9
	Practice	3	7	3	1	10	4
Evaluation							
9. Assess Achievement	Theory	0	7	8	3	7	5
	Practice	2	5	8	3	9	3
Individual Differences							
10. Attend to Individual Diff.	Theory	0	7	8	1	4	10
	Practice	2	8	5	2	6	7
Management							
11. Manage Class	Theory	1	8	6	1	6	8
	Practice	3	7	5	2	8	5
Interpersonal Relations							
12. Relate to All	Theory	2	5	8	0	7	8
	Practice	2	6	7	1	6	8
13. Foster Positive Interaction	Theory	0	6	9	0	5	10
	Practice	2	6	7	3	3	9
Professionalism							
14. Dev. Educ. Philosophy		0	8	7	0	5	10
15. Reflective		0	5	10	3	0	10

Simmary Rating	1	2	3	4	5	1	2	3	4	5
	0	0	4	7	4	1	0	3(1+)*	7(3+)*	2

* The (1*) indicates that 1 student rated the program as a 3+, the (3+) that 3 students gave the program a 4+ rating.

certification-only group, and Connecting to Prior Learning (6) and Assessment (9) for the MAT students being rated by more than 1 student as Not Satisfactory. More students in the MAT program than in the certification-only sequence felt Very Satisfied in many of the competency area, particularly Subject Area Knowledge (1), Planning Curriculum(3), and the theory of how to Provide Variety (5) and to Connect to Prior Learning (6). However, except for Curriculum Planning (3), the students in the two programs, overall, did not rate their sense of competency in "practice" all that differently. The fifteenth competency, Reflection, is interesting because the majority of students in both programs gave Very Satisfactory ratings, yet there were three Not Satisfactory ratings in the MAT program. Examination of the individual forms indicated some strong responses to the extent to which reflection was emphasized--as one student said "Almost too much! It's become an "in" joke within the program."

Comments from the certification-only group indicated that the students felt positive about their practical student teaching experience although they recognized they were not experts yet. They were most specific about the lack of adequate subject area knowledge. Interns were most likely to comment on the need for more practice, being quite satisfied with their theoretical knowledge. Examination of the individual forms did not reveal that the Not Satisfactory ratings were uniformly from the same individuals. Therefore, those that were rated more poorly by their supervisors were not necessarily the ones who felt dissatisfied with the program. Some of the same areas of strength and weakness of the two programs were apparent here as in the other forms, although more students were rated highly(5) by their supervisors in practice in the competency areas than felt very satisfied with their preparation for practice.

Summary and Conclusions

The results indicate that in general both options, the certification-only and the MAT, provided the majority of the preservice teaching candidates with satisfactory knowledge of effective teaching practices and ability to implement those practices in the classroom. From the data for the secondary teaching candidates, attainment of the theoretical knowledge was perceived as greater than the practical skills. It is also apparent from the data that all sequences were able to encourage students to develop the capacity for reflection (Competency Area 15), a major goal of the Teacher Education Program as a whole.

Comparison between the programs indicates some differences in their impact, the most direct comparisons being possible between the certification-only and MAT secondary certification evaluations. The most critical difference is that the MAT program does have more students who were perceived by their supervisor as very successful in their student

teaching at the secondary level. Thus there is an effect of the MAT program with its more intensive, coherent structuring where all students move as a cohort through the courses and practica experiences with strong peer support and socialization, and where there is the extensive exposure to the teaching and learning process in the public schools through the internship. Of course, some of the effect may be the result of differences in the admissions procedures of the two programs. While the two student groups did not differ substantially on the demographic variables, the lack of more careful screening in the certification-only program may allow individuals to enter the preparation process who are less personally suited to being a teacher. It is also possible that the differences were to some extent a result of differences in the selection process for the supervisors. Since the certification-only programs were not able to be as selective of the supervisors, and did not work with them as specifically to determine experiences and expectations for the students, the supervisors of some may not have been as supportive of the goals of the program, as effective in guiding those that were less strong initially, or as realistic in their assessment of what is possible for student teachers.

Looking more specifically at what in the program may have produced the stronger results, the fact that the elementary education certification-only sequence produced similar if not superior results to the MAT program on the student evaluation by the supervising public school teacher may support the conclusion that a coherent block of professional preparation which extends over several terms is most important for producing highly competent beginning teachers, with the internship being less significant. However, there are several other factors to consider before drawing that conclusion. First, this group of elementary candidates was described as a particularly strong one--the positive results for such a high percentage of the students may not be reproducible, that is, attributable to the program itself. Data from another group of elementary students would help to clarify the impact of this one aspect of the training program. Second, since there are insufficient data from the other forms on the elementary candidates to use to verify the evaluations, the possibility that the elementary student teacher evaluations were generally less critical, or used a different basis for comparison, cannot be discounted. Again, more data is required. Finally, a common complaint among supervising teachers of the traditional student-teaching practicum is that their students are not able to experience the entire academic year and thus are not fully prepared to assume the role of a beginning teacher. Here, the mentors of students in the MAT program felt their students were better prepared because of the extended time with them. It may be the case that there are substantial other benefits from the internship that are not directly assessed by these particular evaluation instruments.

Further study is obviously necessary to separate the effects of the various components of this new model of teacher preparation.

However, a more fundamental difference between the programs may be what is important in the long run rather than the specific structuring of the experience. The thrust of most of the recommendation for improving teacher education gleaned from the research literature is towards providing preservice teachers with greater subject area and professional knowledge in order to develop reflective decision-makers who are most effective at encouraging student learning. The MAT program clearly provides more extensive subject area education than does the secondary certification-only sequence for post-baccalaureate students (undergraduate students have more accessible knowledge from their recent college coursework). The impact of that is clear from the data: students are better prepared in their subject area as perceived by themselves and their supervising teachers. And such a grounding is perceived as necessary by all--MAT students were pleased with their knowledge, the certification-only secondary students who were post-baccalaureate felt the need for more such knowledge. Aside from the subject area knowledge, the MAT students receive a more coherent, intensive exposure to the theoretical basis for effective teaching, and report that they have a very strong understanding.

Given a stronger knowledge base, the issue becomes whether that translates into better decision makers who are more effective in encouraging student learning. The data suggest that this does not necessarily occur. Strong subject-area knowledge and a theoretical understanding of educational practice does not necessarily guarantee, during the student-teaching experience, appropriate subject area presentation for high school students, high satisfaction on the part of supervisors with the preparation for practice of education, or a sense of personal efficacy on the part of the students in implementing that practice. It may be possible that such skill is not possible to attain during preservice preparation. One of the teachers in the certificate program commented "Finding the ability levels of high school students may be a skill that develops over time. This item is a good argument for an intern teacher program where a teacher candidate can become acquainted with high school students on a long-term basis." However the interns actually only teach for approximately one term, just as the certification-only students do. The rest of the year they are not necessarily having to translate their knowledge or to develop their teaching skills because they are interacting with the students in other than an actual teaching capacity. Since there is a limit to how much time the intern can be teaching, given the needs and desires of the students and parents (the intern is not their regular teacher), those skills that require time in actual teaching may not be achievable at a high level during what is feasible for the student teacher or intern experience.

The fact that students in the certification-only sequence were able to function satisfactorily for the most part, as perceived by their supervisor, and to report rather similarly on their sense of efficacy in the classroom, lends support to the conclusion that there is only so much that can be accomplished in terms of acquiring the ability to implement complex teaching skills prior to assumption of a regular teaching position. However, before accepting that explanation, one alternative hypothesis needs to be considered. It is possible that the experience of the intern, and the mentor, is significantly different from that of a student teacher and supervisor, that the expectations of the mentor for what is feasible to accomplish are higher. The time the student spends in the classroom is longer. As a result, the evaluation criteria may be different--not what is possible within 10 short weeks, but what ought to result from a year with that teacher, those students, in that school--in, other words, a higher standard for a beginning teacher who is really not so beginning. If this explanation is correct, the MAT students may actually be considerably better than the certification-only group in the attainment of the competencies but are not any more highly rated because the standard to which they are being compared is higher. This possibility makes the comparison across programs very problematic. What is needed to determine more conclusively whether the two groups are equally or differentially effective in practice as student teachers is objective data on the learning of their public school pupils. The state has now mandated the analysis of work samples during the student-teaching experience which will provide precisely that type of information. In addition, a larger N and more complete feedback from the candidate and their supervisors on the other forms would provide more confidence in the conclusions.*

Even if the MAT and certification-only students <u>are</u> generally equal in their level of skill and sense of professional efficacy during their student teaching, it is very possible that students, such as the MAT interns here, who, during their preservice preparation, gain greater subject area knowledge and theoretical understanding of the process of teaching, are better able <u>subsequently</u> to develop the skills necessary to translating their subject area knowledge appropriately, and to teach most effectively. Thus it is most important now for determining the effectiveness of any teacher education program to obtain longitudinal data on the students' successes as beginning teachers, and as a contributors to effective teaching and change in the schools. Both information from first-year teachers to see whether

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* One note of concern, these ratings are what the public schools use to determine who shall be hired. The consumers of this information would not distinguish between the meanings of the ratings for the one group versus the other, leaving the MAT students, despite whatever greater skills, knowledge and confidence they may possess, being compared to those who have lesser abilities but are evaluated as highly based on different expectations.

progress is swifter, and from later years to see whether skills are greater would be useful. Only then can final conclusions be drawn.

In summary, from the evidence above, supervisors and students, in both secondary teacher education programs at least, felt the program encouraged reflection and generally provided the competencies which are considered indicative of effective teaching at the level possible for beginning teachers. Yet clearly the interns as a graduate group had more knowledge of their subject area and more theoretical knowledge of effective educational practice, including a variety of models of teaching. If developing skill requires experience, it also requires a base of knowledge. The interns certainly have that while it is less certain for the secondary certification-only. It is possible that it is not the internship that is important, that rather a coherent, intense program with strong cohort support and socialization process. Further evaluation from the elementary program would provide some insight here. What the evidence here suggests is that the MAT program does accomplish its goals within what is feasible for a beginning teacher. The focus must now turn to documenting the development of skills as the students become full professional teachers. What still needs to be determined is whether the theoretical knowledge will translate into more effective teaching practices more quickly and to a greater extent. If that is the case, than a model of teacher preparation such as was developed here becomes the path to better education practice.

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